

UNIT 9

Probability and Statistics

PROJECT BASED LEARNING

Apr 13-10:09 AM

Connect

INSTRUCTIONS

All work must be provided using smart notebook provided on your netbook. (you may have to look up a tutorial on how to do things)

Step 1 - take a class to use YouTube to find how to use Smart notebook 10

Steps 2 - 5 should not take any longer than 4 periods.

Step 6 - you will have 1 period to complete.

Step 7 - you will have 2 period to complete.

Step 8 -you will have 1 period to complete.

Step 9 -you will have 4 periods to complete.

You will have a final presentation of 5 - 7 minutes to explain your project plan and results

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Assessment

Final Product

Steps 2 - 5 completed in smart notebook.

- well presented and organized.
- no spelling errors
- correct content

Step 7 - completed in smart notebook

- each section is well detailed and all questions answered
- no spelling errors
- correct content

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Assessment

Final Product

Step 9 completed in smart notebook.

- well presented and organized.
- no spelling errors
- correct content
- data collected displayed in table form
- data collected displayed in graph form
- provide a rubric for classmates to use to evaluate

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Connect**STEP 1**

The objective of today is to make sure you have the understanding of how to use **Smart notebook 10** in order to complete your assignment with the probability and statistics unit.

Go to the following tutorials on how to use Smart notebook 10 or find your own.

Smart Notebook 10 Toolbar



Smart Notebook 10 Adding School Tube Videos



Smart Notebook 10 Basic Tools



Smart Notebook 10 Infinite Cloner and Pin Page



Smart Notebook 10 Object Animation



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Connect**STEP 2**

The objective of today is to make sure you have the understanding of the following terminology that belongs with the probability and statistics unit.

Please look up and copy down the following terminology. Provide an example or use the term in a sentence underneath your definition before moving on.

Probability

Theoretical Probability

Experimental Probability

Bias

Data

Subjective Judgement

Population

Census

Sample

Valid Conclusions

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Connect**STEP 2**

The objective of today is to make sure you have the understanding of the following terminology that belongs with the probability and statistics unit.

Answer the following questions:



1) When you toss a coin, what assumption are you making when you say the probability of it landing heads up is 0.5?

2) Car insurance for teenagers is more expensive than for adults because the probability of an accident is greater for teenage drivers. What assumptions is an insurance company making when it charges a teenage driver more for insurance?

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Connect**STEP 2**

The objective of today is to make sure you have the understanding of the following terminology that belongs with the probability and statistics unit.

Answer the following questions:



3) Find two examples on the Internet of how politicians or environmentalist use probability.

Class Discussion: (Last 20 minutes of class)
Page 427 # 3,4,5,11
Page 440 # 3,4,5,6,8, 10

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Connect**STEP 3**

The objective of today is to make sure you have the understanding the factors with collecting data with the probability and statistics unit.

List and describe the 8 factors of collecting data.

For each factor, complete question 13a - page 436.

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Connect**STEP 3**

The objective of today is to make sure you have the understanding the factors with collecting data with the probability and statistics unit.

Answer the following questions:

Discuss
the **ideas**

1) How could the use of language affect the data collected?
Provide an example.

2) Two factors that may influence data collection are **time** and **timing**. What is the difference between these?

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Connect**STEP 3**

The objective of today is to make sure you have the understanding the factors with collecting data with the probability and statistics unit.

Answer the following questions:

Discuss
the **ideas**

3) Create a table displaying advantages/disadvantages of collecting data from
a) a population
b) a sample

4) What does "valid conclusion" mean? Provide an example where the conclusion based on a sample is not valid.

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Connect**STEP 3**

The objective of today is to make sure you have the understanding the factors with collecting data with the probability and statistics unit.

Answer the following questions:

Discuss
the **ideas**

Class Discussion: (Last 20 minutes)

Page 435 # 3,4,5,6,7,8

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Connect**STEP 4**

The objective of today is to make sure you have the understanding the different sample methods with collecting data in the probability and statistics unit.

Use the following document to name the following sampling methods (page 446) - then match the examples to the correct method.

sampling_methods.docx

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Connect**STEP 4**

The objective of today is to make sure you have the understanding the different sample methods with collecting data in the probability and statistics unit.

Answer the following questions:



- 1) Which sampling methods are least likely to produce valid conclusions? Explain your answer.
- 2) Which sampling methods are most likely to produce valid conclusions? Explain your answer.

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Connect**STEP 4**

The objective of today is to make sure you have the understanding the different sample methods with collecting data in the probability and statistics unit.

Answer the following questions:



Class Discussion: (Last 20 minutes)
Page 448 #3,4,5,6,8

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Connect**STEP 5**

The objective of today is to make sure you have the understanding of the 5 different steps to creating a project design in the probability and statistics unit.

Find the 5 steps to creating a project design and create notes in your own words.

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Connect**STEP 5**

The objective of today is to make sure you have the understanding of the 5 different steps to creating a project design in the probability and statistics unit.

Answer the following questions:



1) Why is it important to plan before you collect data?

2) How can a rubric help you reflect on your plan?


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Connect**STEP 6**

The objective of today is to make sure you have the understanding of how to use **Google Forms** in order to complete your assignment with the probability and statistics unit.

Go to Google and create an account using your student ID and student exchange email.

Go to the following tutorials on how to use Google Forms or find your own.

 Google Forms Introduction

 Free online Survey

 Google Doc Forms

 Google Doc Forms Tutorial 2

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Practice**STEP 7**

The objective of today is to make sure you have the understanding of the 5 different steps to creating a project design in the probability and statistics unit.

You and your partner are to prepare a project plan for your data collection. In Step 9 you will carry out the data collection, analyze and display your results, then draw conclusions.

Go through Page 455 - 456 of your text and answer each of the questions to create your project plan.

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Connect**STEP 8**

The objective of today is to create a class rubric to mark your project to complete your assignment with the probability and statistics unit.

As a class come up with a rubric to guide the final project mark.

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Practice

STEP 9

The objective of today is to make sure you have the understanding of the 5 different steps to creating a project design in the probability and statistics unit.

You will collect data for the project plan you designed in STEP 7. You will then present your findings and assess your work.

Go through Page 461 of your text and answer each of the questions to help complete your project plan.

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Attachments

sampling_methods.docx